Where We're Going We Don't Need Roads:

The Transformation of the Workforce through Artificial Intelligence

Allegis Global Solutions
Darren Simmons
Global Managing Director
‘Where we’re GOING, WE DON’T NEED ROADS’

The Transformation of the Workforce through Artificial Intelligence

Presented by: Darren Simons
About Allegis Global Solutions (AGS)

MSP
- 104 current programs
  - Services Procurement, Payroll, 1099 and Independent Contractor Management

RPO
- 54 current programs
  - Scalable recruitment solutions supporting enterprise wide requirements

Advisory Services
- Workforce optimization, talent attraction strategy development, human capital consulting, business analytics

[Diagram showing MSP, RPO, and Advisory Services with respective program counts and services provided]
Today’s Agenda

- Why does this matter?
- 4 areas of disruption
- Robotic process automation
- Where we are going we don’t need roads
ROADS?

WHERE WE'RE GOING, WE DON'T NEED ROADS.
“Once we get rid of the dude in the car, Uber will be cheaper”

Travis Kalanick, Uber CEO - May 28 2014
Robotics and artificial intelligence will permeate wide segments of daily life by 2025 with huge implications…

*Pew Research Internet Project*
Robotic Process Automation

A capability that Enterprise business users can use to quickly and inexpensively develop custom robots to automate Back Office business processes and build a Virtual Workforce*.

Optimized for automating business processes that are:

- Structured, repeatable, screen based tasks
- Costly for existing workforce to perform
- Problematic due to being error prone, inconsistent or having fluctuating volumes
- Requiring automation more urgently than the existing strategy for change can deliver

Utilizes the existing application presentation layer providing:

- Fast automation of existing processes – often in weeks
- Use of existing IT controls, governance and security

Blue Prism*
The Luddites
In the coming years the disruption will be felt by more people in more places, for four reasons.
The rise of machine intelligence means more workers will see their jobs threatened.
THE FIRST COMPUTER?
TOP 10 JOBS IN DANGER OF BEING DIGITALIZED

Telemarketers
Title Searchers
Math Technicians
Underwriters
Library Technicians

Tax Preparers
Accounts Clerks
Data Entry Keyers
Insurance Appraisers
Umpires

* Erik Brynjolfsson, co-author of Race Against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy,
While it can take decades for workers to acquire the expertise needed for new types of employment, he says, “we never have run out of jobs. There is no long-term trend of eliminating work for people. Over the long term, employment rates are fairly stable. People have always been able to create new jobs. People come up with new things to do.”

http://www.technologyreview.com/featuredstory/515926/how-technology-is-destroying-jobs/
As many as half a million accountants, supermarket cashiers, secretaries, typists and bank tellers in what are largely white-collar jobs are threatened by automation, Department of Industry modelling shows. However, growing fears that robots and artificial intelligence could cast millions from the middle-class into unemployment and poverty are overblown, the department’s chief economist, Mark Cully, said.

http://www.afr.com/p/national/report_to_jobs_threatened_by_rise_mr0g5Cl1rEbvrKMcBFTzJJ
According to the International Federation of Robotics (IFR), global sales of robotics increased by 38.0% in 2011.

The forecast increased use of automation could contribute to an increase in unemployment rates globally, as the working age population aged 15-64 is set to grow from 4.6 billion in 2012 to 5.0 billion by 2020. Many of the increased numbers of the economically active global population may be competing for a reduced number of available employment opportunities as a result of automation.

https://laboureconomics.wordpress.com/2013/05/10/the-impact-of-automation-on-global-labour-market-3/
Rams Beaten by Seahawks

December 28, 2014 8:09 PM
Automated Insights

The Rams turned it over three times, managed only 24 points against the Seahawks, 20-6, at CenturyLink Field.


Benny Cunningham rushed for 10 yards on four carries with one fumble. Jared Cook caught three passes for 36 yards.

The St. Louis defense played well in the loss, giving up a sack to Wilson three times.

Seahawks running back Marshawn Lynch racked up 69 yards down the field.

LinkedIn reports its third-quarter earnings on Thursday, October 30, 2014, and the consensus earnings per share estimate is five cents per share.

The consensus estimate hasn’t changed over the past month, but it’s up from three months ago when it was a loss of one cents. For the fiscal year, analysts are projecting earnings of 28 cents per share. Revenue is projected to be 42% above the year-earlier total of $393 million at $557.5 million for the quarter. For the year, revenue is expected to come in at $2.18 billion.

Revenue increased in the last two quarters. In the most recent quarter, revenue rose 36% year-over-year to $533.9 million. The quarter before that, it rose 46%.

The majority of analysts (68%) rate LinkedIn as a buy. This compares favorably to the analyst ratings of nine similar companies, which average 63% buys.

Other companies in the technology sector include: Google and Pandora.

Earnings estimates provided by Zacks.

Narrative Science, through its proprietary artificial intelligence platform, transforms data into stories and insights.
A robotic hamburger kitchen already exists that can produce 360 gourmet hamburgers in one hour. McDonalds corporation has enough profit to fund the development of automated machines that could provide a one year return on investment. Each McDonalds might need more one machine. Each machine takes up 24 square feet and replaces the people who cook and the kitchen.

The automated restaurant in Tokyo has each table is equipped with a touchscreen ordering system, a high speed food delivery conveyor, and a chute for dirty plates. The only staff are in the kitchen, which is also partially automated.

http://nextbigfuture.com/2013/12/automation-of-restaurants-would-allow.html
Wealth creation in the digital era has so far generated little employment.
In 1900, 41 percent of Americans worked in agriculture; by 2000, it was only 2 percent. Likewise, the proportion of Americans employed in manufacturing has dropped from 30 percent in the post–World War II years to around 10 percent today—partly because of increasing automation, especially during the 1980s.
US Productivity, GDP, Employment and Income

- Labor Productivity
- Real GDP
- Private Employment
- Median Household Income
US Population and Labor Force 1950

Male

Female

Population

Labor Force

Male

Female

Labor Force

Population

Age

Millions

0-15

16-24

25-34

35-44

45-54

55-64

65-64

75-84

85+

Millions

0

5

10

15

20

25

30

30

25

20

15

10

5

0

0

5

10

15

20

25

30

Population

Labor Force
Entrepreneurs can turn their ideas into firms with huge valuations.
Jonathan Lu - CEO, Alibaba group
Increased technology adoption will create wider skill and income disparities.

Compound-Adjusted Real Log Weekly Wages

- High School Graduate
- College Graduate
- Some College
- Graduate School
- High School Dropout
Cumulative Percent Change Since 1948

- Productivity
- Hourly Compensation

Cumulative Percent Change:
- Productivity: 254%
- Hourly Compensation: 113%
Total Change Since 1970

- Median Executive Income
- Corporate Profits
- Average Wage Income
SO WHAT?!
THANK YOU

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Key themes: reasons to be hopeful
1. Advances in technology may displace certain types of work, but historically they have been a net creator of jobs.
2. We will adapt to these changes by inventing entirely new types of work, and by taking advantage of uniquely human capabilities.
3. Technology will free us from day-to-day drudgery, and allow us to define our relationship with “work” in a more positive and socially beneficial way.
4. Ultimately, we as a society control our own destiny through the choices we make.

Key themes: reasons to be concerned
1. Impacts from automation have thus far impacted mostly blue-collar employment; the coming wave of innovation threatens to upend white-collar work as well.
2. Certain highly-skilled workers will succeed wildly in this new environment—but far more may be displaced into lower paying service industry jobs at best, or permanent unemployment at worst.
3. Our educational system is not adequately preparing us for work of the future, and our political and economic institutions are poorly equipped to handle these hard choices.

http://www.pewinternet.org/2014/08/06/future-of-jobs/
The prosperity unleashed by the digital revolution has gone overwhelmingly to the owners of capital and the highest-skilled workers. Over the past three decades, labour’s share of output has shrunk globally from 64% to 59%. Meanwhile, the share of income going to the top 1% in America has risen from around 9% in the 1970s to 22% today.

Unemployment is at alarming levels in much of the rich world, and not just for cyclical reasons. In 2000, 65% of working-age Americans were in work; since then the proportion has fallen, during good years as well as bad, to the current level of 59%.

Until now the jobs most vulnerable to machines were those that involved routine, repetitive tasks. But thanks to the exponential rise in processing power and the ubiquity of digitised information (“big data”), computers are increasingly able to perform complicated tasks more cheaply and effectively than people. Clever industrial robots can quickly “learn” a set of human actions. Services may be even more vulnerable.

Is your job safe? If it is a mostly manual job, there is a lower chance of it being replaced by a computer in the next 20 years if it requires “perception and manipulation” skills. Plumbers visit hundreds of houses in a single year, each requiring unique, highly detailed work. Baxter would struggle. Yet, wholesale workers, for example, are in trouble. Companies such as Amazon design their warehouses large, wide and predictable for robots a bit like Baxter.

More cognitive workers will thrive to the extent their work requires what Frey and Osborne call “creative” and “social” intelligence. If your job involves the development of novel ideas, or if it depends on a lot of human interaction and empathy, then there is less chance of it being displaced, they say. Jobs at low risk include: psychologists, curators, personal trainers, archaeologists, marketers, public relations, most engineers, surgeons and fashion designers.
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www.sig.org/eval
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